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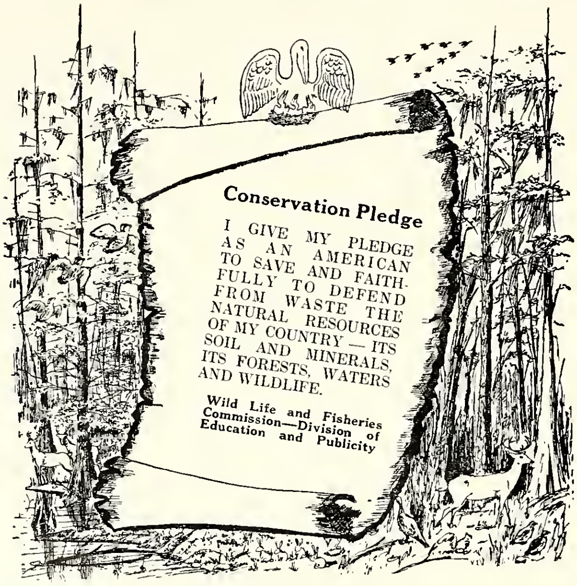

Conservation Pledge

I GIVE MY PLEDGE AS AN AMERICAN TO SAVE AND FAITHFULLY TO DEFEND FROM WASTE THE NATURAL RESOURCES OF MY COUNTRY — ITS SOIL AND MINERALS, ITS FORESTS, WATERS AND WILDLIFE.

Wild Life and Fisheries Commission—Division of Education and Publicity

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EDITORIAL

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COVER

LOUISIANA ALLIGATOR HUNT

By RUDOLPH EASTERLY, *Director*
Louisiana Wild Life and Fisheries Commission

RUDOLPH EASTERLY

It is with firm determination and fixed resolve that I have accepted the position of acting director of one of our most important state governmental agencies. When I make this statement, I mean that I am determined to carry out my lifelong policy of fair play in administration of my employees and shall expect the heads of the various departments of the Louisiana Wild Life and Fisheries commission to do likewise. I am also firmly resolved that our employees shall show the same impartiality when dealing with the people with whom they come into contact.

We fully realize that just as the impartial administration of justice is the foundation of all liberty, fair but rigid enforcement is the backbone of all conservation.

To make a point, we have no better proof of this than to consider the results of the strict enforcement last year of Louisiana's new closed season for the protection of growing shrimp in our inland waters which are their nursery grounds. The passage of this law was the culmination of a meeting of the minds of groups of shrimp fishermen, packers, and sports fishermen who after much deliberation with commission biologists and representatives drew up laws for their mutual advantage. Suffice it to say that without enforcement and cooperation these laws would have been mere scraps of paper.

The results of this teamwork, although they reflect only a fraction of the overall conservation picture, cannot be too widely publicized because it is unfortunately the common belief of many of our citizens that we are blessed with such an abundance of seafood that the sea is inexhaustible. Nothing could be farther from the truth as regards our shrimp, that is, if we destroy their young at the fountainheads which are their nursery grounds in our inland waters.

Now the results of the strict enforcement of the shrimp laws have been acclaimed eminently successful and fulfilled the predictions of the commission's scientists. The shrimp, allowed to grow unmolested, produced one of the best harvests seen in many years much to the satisfaction of all concerned.

The commission is, of course, not claiming all of the credit for the aforementioned, for as we all realize, Mother Nature operates in many devious ways to protect perpetuation of her wildlife species and often successfully without the aid of man. However, the results of this second year of closed seasons, if successful as was the last, may serve to convince all concerned that conservation and its impartial enforcement is at least a great part of the answer.

Now that we have made a point for enforcement, may I say that I am fully cognizant of the fact that education is also a vital factor in successful conservation. Therefore, it is my resolve to step up and continue our program of wildlife conservation education, not only among our general public, but also in our schools for I am a firm believer in the old adage, "As the twig is bent, so grows the tree." By this same token, the child well versed in the nobility and grandeur of nature and its wildlife will be our conservationist of tomorrow.

Moreover, and last but not least, I intend to urge the continued cooperation of our various sportsmen's clubs, civic organizations and federation groups in furthering conservation education programs.

Alligator In The Marsh

Richard K. Yancey

Chief, Refuge Division

This hunter is probing an alligator hole. When he finds him he will be dragged out and the tussle will begin. It is dangerous business but profitable.

The value of the Louisiana alligator is one that is not widely recognized in the State. Only the hunters, dealers, and manufacturers, who profit from the skins are fully aware of the amount of money that is annually derived from the alligator hide business. In 1958 it was estimated that trappers received nearly $300,000 from approximately 28,000 alligator skins that they sold to dealers. Very few, if any, trappers make their entire living from hunting alligators but many receive a sizeable supplement in income each year.

In recent years the value of alligators has been more increasingly recognized by those engaged in marsh management. Many sections in the coastal areas, especially in Southwest Louisiana, are subject to drouth during the summer and fall months. At such times available water supplies, important to all forms of marsh bird and animal life, are usually in very short supply. In areas frequented by high populations of alligators this problem is partially offset by the fact that the larger reptiles dig and maintain deep freshwater wells of up to 20 ft. in diameter. These wells are in turn important as a source of water for fur bearers, wading birds, waterfowl, and deer.

Alligator hunting augments the income of many fishermen and trappers. These alligator hides now being stretched and cleaned will possibly find their way to Paris to be tanned and back to New Orleans to be made into luxury items.

From the esthetic viewpoint, alligators are of little value in the wild since they are not particularly handsome creatures to observe. In spite of this fact, however, many people get a thrill from seeing one in its native habitat. The economic value is largely based upon the attractiveness of belts, wallets, handbags, shoes, etc., made from alligator skins, therefore, they are esthetically important after all.

In recent years alligator hunters have received $2.25 and more per linear foot for the medium sized hides. Six-foot skins in good condition frequently bring up to $18.00 and for this reason they are very heavily hunted from the mouth of the Mississippi River to Sabine Pass. If a trapper is able to take only one or two medium sized alligators during a hunt it is considered a worthwhile effort.

Because of this high value many other people in addition to the regular trappers have sought alligators on a commercial basis. Large numbers have been taken from the marshes by exploration crews working from marsh buggies. in recent years the coastal marshes have been criss-crossed time and again by these work parties. In most cases when an alligator well is located all work stops until the occupants have been "poled out" and unceremoniously relieved of their belly skins to be salted and sold later to the nearest buyer.

The taking of alligators in this manner plus the regular commercial hunting has greatly depleted the populations in the coastal marshes. Only on the State and National Wildlife Refuges are large numbers still to be found. No hunting is permitted on the State Refuges and the Rockefeller and Marsh Island Wildlife Refuges are believed to contain the largest numbers still present anywhere in Louisiana.

Past records of the Louisiana Wildlife & Fisheries Commission show that approximately 36,000 alligator skins were taken in the fiscal year of 1948-1949. In 1955-1956 the take declined to 10,300 and a greater percentage of small alligators less than 5 ft. were harvested.

In 1957-1958 a total of 28,600 skins were sold representing a substantial increase. At first thought this would appear to indicate an improved population status but this apparently is not the case. On July 27, 1957, the storm driven tidewaters of hurricane "Audrey" swept many thousands of alligators from the Refuge areas of southwest Louisiana on to adjacent private lands to the north. Some of these died from the storm but most survived only to be taken shortly thereafter by hunters. Reports were received that one pair of hunters made several thousand dollars during a three week period after "Audrey" near one of the Refuges. This storm was the only apparent reason for the increase in harvest for 1957-1958.

Under the present gator law we find that they may be taken down to a size of two feet. An open season is maintained for part of the year during which they can be taken by certain means only. For another part of the year they are outlawed and may be taken by any means. During another part of the year the season is closed entirely. This has led to some confusion, according to agents of the Commission's Enforcement Division, all of which has worked to the detriment of the alligator industry.

Contrary to public belief an alligator will grow and reproduce very rapidly under natural conditions. Past studies have shown that five and six footers are usually only six or seven years old. A two foot alligator worth only one or two dollars is valued at $15.00 or more if permitted to live for another three or four years. In 1957-1958 a total of 23,115 alligators out of the 28,620 taken were under 5 ft. in length and this is much the same as if a farmer were to harvest a crop before it has reached the income producing stage.

Normally the female alligator begins to reproduce when they reach a length of five or six feet. They usually nest once each year in June, July and August and lay in excess of 30 eggs. Although most nesting takes place in the marshes several nests were found on top of levees at the Rockefeller Wildlife Refuge in Cameron Parish just prior to hurricane "Audrey". These were constructed from grass and measured about 4 ft. across and 18 inches high. They were closely guarded by the female although she would disappear under water when her nest was approached.

In the coastal areas alligators prefer the fresh marshes although they are found in large numbers in the brackish areas. Only on rare occasions are they to be observed in the salt marshes.

For food, alligators will consume about any small form of marsh life available. Blue crabs, rough fish, snakes, turtles, nutria, raccoons, muskrat, and even some birds are readily taken if available. The food supplies are abundant and this coupled with ideal habitat conditions produces what is considered to be the world's finest skin for making wallets, shoes, belts, handbags, etc.

This fact was confirmed by Maximillian Rinow, New Orleans manufacturer of alligator goods who sells to some of the most exclusive stores in the country and is considered an authority in the business. One of the most interesting features of Rinow's business is the fact that he ships the raw hides to Paris where they are processed, tanned and returned from France to his factory at 2521 Iberville Street, in New Orleans. There they are made into the finest quality leather goods and bear the labels of such establishments as Brooks Brothers, Sulka, Abercrombie and Fitch, Marshal Fields, Sakowitz, A. Magnin, and others.

Louisiana alligator hides are considered the finest in the world and that is why hunters such as the one above produced more than 25,000 of the skins for a waiting market.

(Continued on Page 21)

Seen at a recent luncheon meeting to make final plans for the Grand Isle Tarpon rodeo to be held July 16, 17, and 18, are: seated, left to right, James Arnoult, Fred Selby, Henry Herr, Parker Saussy, Frank Vonder Haar, Stanley Holliday, Percy Davis, Judge Walter B. Hamlin, Steve Harmon, and Dr. Leo J. Kerne. Standing, are (left to right) Marion Higgins, Urban Wilkinson, Allison Borne, Dr. Don Peterson, and Rudolph P. Easterly. A record turnout for the classic has been predicted.

Fish Rodeos Furnish Research Data

Percy Viosca, Jr.

Marine Biologist

A HUNDRED OR MORE different kinds of fishes, varied as to size, shape and color, await the angler who casts his line in one of the famous salt walter fishing tournaments held every summer along the Louisiana coast.

Some eighty-three species have been identified from specimens taken in recent contests, and the number is no doubt considerably larger because most fish without prize value are not brought in to the weighing docks. Our scientific studies also indicate that numbers of additional species occur in the area.

The habitats from which these fish are taken can be divided roughly into three types: the offshore, or open Gulf (oceanic) waters, the nearshore (littoral) Gulf waters, and the more protected bays and sounds (estuarine waters). The offshore, oceanic habitat can be divided further into two zones, the outer *blue water* zone, and the inner *green water* zone adjacent to the coast. The greenish color is due to an abundance of tiny plankton plants which obtain their nutrition from land drainage. The blue water, which is relatively free from plankton plants, generally lies about 30 miles off the Louisiana coast, but this may vary considerably from time to time, and from place to place.

Some species, like the tarpon, mackerels, and blacktip shark, feed by preference in the passes which connect the bays and sounds with the gulf and along the tide rips, where water from the rivers or passes is in the process of mixing with the greener Gulf water. Rafts of floating gulfweed (*Sargassum*), which are apt to show up anywhere in the gulf, also afford excellent fishing.

Many fishes frequent the reefs, of which there are two types: *offshore reefs* formed by corals and other lime-forming organisms and *oyster reefs* found in the shallow, more enclosed waters of sounds and bays.

Listed below are species identified from specimens taken by sport fishing methods, with a supplemental list of some of the more important species used for bait:

GAME, FOOD AND NUISANCE SPECIES

SHARKS:

Nurse shark	*Ginglymostoma cirratum*
Tiger shark	*Galeocerdo articus*
Sharpnose shark	*Scoliodon terrae-novae*
Blacktip shark	*Carcharhinus limbatus*
Bull shark	*Carcharhinus leucas*
Shovelnose shark	*Sphyrna tiburo*
Hammerhead shark	*Sphyrna zygaena*
Mako shark	*Isurus oxyrinchus*
Great white shark, man-eater	*Carcharodon carcharias*

RAYS:	
Sawfish	*Pristes pectinatus*
Clearnose skate	*Raja texana*
Large sting ray	*Dasyatis americana*
Stingaree	*Dasyatis sabina*
Butterfly ray	*Pteorplatea micrura*
Spotted whip ray	*Aetobatus narinari*
Cownose ray	*Rhinoptera quadriloba*
Giant manta	*Manta birostris*
GARS:	
Alligator gar	*Lepisosteus spatula*
TARPONS:	
Ladyfish	*Elops saurus*
Tarpon	*Tarpon atlanticus*
LIZARD FISHES:	
Lizard fish	*Synodus faetens*
CATFISHES:	
Gafftopsail catfish	*Bagre marinus*
Hardhead catfish	*Galeichthys felis*
EELS:	
American eel	*Anguilla rostrata*
NEEDLEFISHES:	
Needlefish	*Strongylura marina*
SEABASSES & GROUPERS:	
Jewfish	*Garrupa nigrita*
Gag	*Mycteroperca microlepis*
Black grouper	*Mycteroperca bonaci*
Rock sea bass	*Centropristes philadelphicus*
Soapfish	*Rypticus bistrispinnis*
BLUEFISHES:	
Bluefish	*Pomatomus saltatrix*
SERGEANT FISHES:	
Cobia	*Rachycentron canadus*
JACKFISHES & POMPANOS:	
Blunt nose jack	*Hemicaranx amblyrhynchus*
Jack crevalle, horsejack	*Caranx hippos*
Hardtail jack, bluerunner	*Caranx crysos*
Bumper	*Chloroscombrus chrysurus*
Moonfish	*Vomer setapinnis*
Lookdown	*Argyreiosus vomer*
Round pompano	*Trachinotus falcatus*
Common pompano	*Trachinotus carolinus*
Leatherjacket	*Oligoplites saurus*
Amberjack	*Seriola dumerili*
Rock salmon	*Seriola falcata*
DOLPHINS:	
Dolphin	*Coryphaena hippurus*
SNOOKS:	
Snook	*Centropomis undecimalis*
SNAPPERS:	
Mangrove snapper, gray snapper	*Lutjanus griseus*
Red snapper	*Lutjanus aya*
Lane snapper	*Lutjanus synagris*
Yellowtail snapper	*Ocyurus chrysurus*
GRUNTS:	
Pigfish	*Orthopristis chrysopterus*
TRIPLETAILS:	
Blackfish	*Lobotes surinamensis*
CROAKERS:	
Silver perch	*Bairdella chrysura*
Redfish	*Sciaenops ocellata*
Spot	*Leiostomus xanthurus*
Croaker	*Micropogon undulatus*
Channel mullet, kingfish	*Menticirrhus americanus*
Black drum	*Pogonias cromis*
Silver sea trout	*Cynoscion nothus*
Sand sea trout	*Cynoscion arenarius*
Speckled sea trout	*Cynoscion nebulosus*
PORGIES:	
Pinfish	*Lagodon rhomboides*
Sheepshead	*Archosargus probatocephalus*
ANGELFISHES:	
Spadefish	*Chaetodipterus faber*
CUTLASS FISHES:	
Cutlassfish	*Trichiurus lepturus*
THREADFIN:	
Threadfin	*Polyneunus octonemus*
MACKERELS & TUNAS:	
King mackerel	*Scomberomorus cavalla*
Painted mackerel, cero	*Scomberomorus regalis*
Spanish mackerel	*Scomberomorus maculatus*
Ocean bonito	*Katsuwonus vagans*
Little tuna, false albacore	*Euthynnus alletteratus*
Yellowfin tuna, allison tuna	*Thunnus subulatus*
Blackfin tuna	*Parathunnus atlanticus*
Common bonito	*Sarda sarda*
Wahoo	*Acanthocybium solandri*
SAILFISHES:	
Atlantic sailfish	*Istiophorus americanus*
Blue marlin	*Makaira nigricans*
White marlin	*Makaira albida*
SHARK SUCKERS:	
Shark sucker	*Echeneis naucrates*
CUSK FISHES:	
Brotula	*Brotula babata*
TOAD FISHES:	
Oyster fish	*Obsanus tau*
TRIGGERFISHES:	
Common triggerfish	*Balistes carolinensis*
BARRACUDAS:	
Great barracuda	*Sphyraena barracuda*
FLOUNDERS:	
Southern Flounder	*Paralichthys lethostigma*

BAIT SPECIES

HERRINGS:	
Small-scaled menhaden	*Brevoortia gunteri*
Gulf menhaden	*Brevoortia patronus*
Thread herring	*Opisthonema oglinum*
ANCHOVIES:	
Striped anchovy	*Anchoa hepsetus*
Bay anchovy	*Anchoa mitchilli*
MULLETS:	
Striped mullet	*Mugil cephalus*
White mullet	*Mugil curema*
SILVERSIDES:	
Tidewater silverside	*Menidia beryllina*
KILLIFISHES:	
Sheepshead minnow	*Cyprinodon variegatus*
Cocero minnow	*Fundulus grandis*
Sailfin minnow	*Mollienisia latipinna*

IMPORTANT

NOTE TO READERS

WITH THE CIRCULATION of LOUISIANA CONSERVATIONIST at approximately 60,000 we now find it necessary to revise our mailing lists. This step is being taken in order to adjust changes of address, to check generally on the correctness of each name and address and to overcome any possible duplication.

WE ARE ASKING all persons who wish to continue receiving the LOUISIANA CONSERVATIONIST to PRINT their present name and address on the card which will be found opposite. Postage on this card is prepaid.

OUR REVISED LISTS will be compiled from the cards which are received. It is necessary that EVERY PERSON who wishes to receive this publication (ten times annually) to return a card.

Each reader *MUST* send a card.

Rudolph Easterly Named Director

Director Rudolph P. Easterly and Chairman E. R. McDonald discuss commission affairs following Easterly's appointment.

THE LOUISIANA Wild Life and Fisheries commission, in special session on Tuesday, June 30, appointed Rudolph P. Easterly, Denham Springs businessman, Director of the state wildlife agency. Easterly has been serving in an acting capacity since June 9.

Before being elevated to the position of director, Easterly had served for more than two years as chief of the commission law enforcement division. On numerous occasions he has been cited by both sport and commercial fishermen for the strict but impartial enforcement of the new Louisiana shrimp law which has been instrumental in bringing Louisiana back to the number one shrimp producing state in the nation.

In announcing Easterly's appointment, E. R. McDonald, commission chairman from Newellton, said: "We are very pleased with Mr. Easterly's leadership and feel this appointment is for the best interest of this state agency and the people of Louisiana. Members of this commission will give him full cooperation in his discharge of duties."

In addition to McDonald, other commission members attending the meeting included George Foster, vice-chairman, Pollock; John Cutrone, Morgan City; A. M. Holden, Baton Rouge; Raleigh J. Pitre, Cut Off and Ray Whatley, Alexandria. The remaining member of the commission, W. L. Caldwell, of Bunkie, was ill in a New Orleans hospital at the time of the meeting.

At the June 23rd meeting of the commission, E. R. McDonald, Sr., was re-elected chairman, and George Foster was re-elected as vice-chairman.

Regardless of methods used, the mud bug was not to be found this year.

The Case Of The Disappearing Crawfish

SUMMER HIGH WATER and the resultant predation by fish, both large and small, which remained with it were among the main causes which occasioned the alarming scarcity of crawfish in the Atchafalaya floodway this past season, according to a report made by Percy Viosca, Jr., chief biologist of the Seafood section of the Oysters, Water Bottoms and Seafood division of the Louisiana Wild Life and Fisheries commission.

"This investigation was instigated by a number of reports received by the commission regarding the current scarcity of crawfish in the Atchafalaya Floodway. Verbal requests for an investigation were made by Mr. Robert Angelle, Representative of St. Martin parish and Speaker of the House; James Ledbetter, President, Louisiana Wildlife Federation; and Leonard Dauterive, President, St. Martin Sportsmen's Club. A resolution addressed to the Direction of the Wild Life and Fisheries commission, adopted by the Board of Aldermen of Breaux Bridge on May 5, recommended that the commission investiate the reasons for the crawfish scarcity and that a study be made to find a way to correct the situation. A communication from R. Combel, of Baton Rouge, stated that both crabs and crawfish were almost extinct in the floodway.

"An extensive, day-long, land and water tour of the Bayou Benoit sector of the floodway, near St. Martinville, was made on May 14, followed by a tour of the sector near Henderson the following day. Many persons cooperated to make these forays into the deep-water crawfish acreas successful, including Leonard Dauterive, of Breaux Bridge; George Voorhies, of Lafayette; Wild Life and Fisheries personnel, including agents Robert Romero, Melvin Dupuis and William Buillard; and numbers of fishermen and dealers in the territory covered in the study," Viosca says.

"After explaining the life history, seasonal development and other biological and physical facts which have a bearing on the productivity of the red swamp crawfish, the Henderson meeting was turned into a round table discussion. Fishermen and dealers alike participated with enthusiasm, made suggestions, and expounded their theories as to the possible causes of the sudden decline in the crawfish harvest. Causes and cures suggested, were listed on a blackboard and will be later discussed.

"On May 27, a subsequent investigation was made on the east side of the floodway, in the Pierre Part and Belle River areas. Oliver Roshko, of New Orleans, inventor of a crawfish picking machine, acted as guide and was very helpful in making the necessary contacts with fishermen and dealers. Three additional theories expounded by Pierre Part fishermen will also be discussed later.

"A visit to the Corps of Engineers, U. S. Army District, New Orleans, was made on May 25 for the purpose of obtaining maps and data which might throw light on the situation in the floodway. The following personnel in the Engineering division were very helpful: Water Carey, assistant to the chief of the division; Rudolph Hertzberg, Chief, Levee section; R. V. Markey, Assistant Chief, Waterway section; and O. M. LaNoue, Planning and Research branch. Myles Patureau assisted in securing suitable maps and copying the needed data. Daily stage and discharge records for the Atchafalaya river over a period of years, previously submitted by George H. Hudson, Chief of the Engineering division, were extremely useful in the preparation of this report. I am grateful to all persons named above and to many others for the cooperation which made possible the gathering of much evidence in a relatively short period of time," Viosca states.

"The life history of the red crawfish has become geared throughout the ages to a normal cycle of spring flood followed by summer drouth. The summer high water of 1958 was an unusual deviation from this normal cycle of climatic events, one which would interfere with the spawning cycle and expose the young to competitors and natural enemies to which they are not accustomed. Excessive numbers of competing organisms, which include many species of young fish, caused a reduction of the food supply available for the crawfish. The limited number of young produced under the prevailing high water conditions of the summer of 1958 continued to dwindle during the fall of that year and during the spring of 1959 because of exposure to excessive predation. This appears to be the logical explanation of the succession of events which led to the recent crawfish catastrophe in the Atchafalaya Floodway," Viosca says.

"As food production must have been high when the crawfish shortage developed, then we must look to excessive consumption as the cause of the shortage, if any. If the crawfish were short of food while more food was being produced, then something else must have beat them to it. For example, crawfish feed on almost anything, animal or vegetable. So do catfish. Bullheads go over the bottom much like vacuum cleaners over a dirty rug. They do the same thing at the surface at night when bugs fall into the water. Nothing is left. This then may be part of the answer to our problem. An acre of water can produce just so much flesh, depending upon its food-producing potential. It makes no difference whether this flesh is crawfish or catfish. You just can't raise cows in a goat pasture.

"It is theoretically possible that the spraying of water hyacinths could kill crawfish in one of both of two ways: by the toxicity of the spraying solution, and/or by the decomposition of the plants which will remove oxygen from the water long after the spraying job has been completed.

"The spraying solutions are said to be non-toxic to aquatic life in the concentrations and quantities used. Furthermore, dense hyacinth mats which cover the entire surface will form only in stagnant bayous and small lakes in which crawfish are not normally abundant anyhow. These areas cover only a small part of the floodway, so spraying these "lilies" could not possibly effect the crawfish in the more open swamps. It is just as well to open these areas to navigation, for it helps the fishermen to get to places which might otherwise be inaccessible.

"However, water hyacinths do not cover the whole surface of a well-shaded swamp. Furthermore, where water is flowing beneath them, as in the floodway, the oxygen supply is constantly being renewed from upstream; hence aquatic life can live and thrive under the scattered patches. Under these conditions, crawfish constantly nibble away at the roots and air bladders, then, as the plants tip over, they eat off the leaves.

"Water hyacinths seem to be a choice and convenient food item for crawfish in the floodway. They form a link in a simple food chain which ends in the pocketbook: *plant food—water hyacinths—crawfish—money*. The fishermen who cash in on hyacinth-fed crustaceans say they would not like to see the plants exterminated.

"*Oil field wastes* are a problem which keeps cropping up here, as elsewhere in the state, and 'where there's smoke, there's fire.' Certainly there is some cause for complaint, for both crawfish and fish caught near oil fields have been rejected because of the characteristic "kerosene" flavor imparted by petroleum wastes. There are a number of oil fields which could effect the floodway if their wastes were not properly disposed of.

"In the aggregate, the oil fields occupy only a small percentage of the floodway area, and if anything, there has been improvement in waste disposal methods in recent years. Besides, the increased flow through the basin during the past two and a half years would tend to lessen the problem. Therefore, except perhaps on a strictly local basis, this factor must be rejected as a cause of the recent sudden decline in the crawfish population over the entire basin."

The various other theories regarding the possible causes of the crawfish scarcity in the Atchafalaya Floodway are enumerated and discussed by Viosca as they were discussed at the Henderson meeting.

"Late blizzards in the North sent much cold water down the Mississippi and Atchafalaya rivers during the late winter and early spring months of 1959. As late as April 20, the water at the Bienville wharf, in New Orleans, registered only 19 degrees above the freezing point (51 degrees fahrenheit). As this has delayed other biological activities in the coastal area, I believed it possible that the crawfish harvest might be delayed for the same reason. This was found not to be the case, for the catch was better in February, when the water was very cold, than later after warming up. Cold water was ruled out, therefore, as a factor contributing to the crawfish shortage.

"It was the belief in the Bayou Benoit sector that too much river water was being diverted into that area by a new pipeline canal across the floodway. At the Henderson meeting, however, it was unanimously agreed that river water is not only beneficial to crawfish, but that a current is absolutely necessary for harvesting them in deep water. Persons familiar with local conditions in the pipeline area stated that all intersections of the pipeline canal with open channels had been properly plugged as required by government regulations.

"Inquiries at the U. S. Engineer District Office confirmed the above statement and also revealed that several pipelines had been laid across the floodway over a period of years. Regulations of the U. S. Engineers provide that the status quo must always be maintained and nothing be done that will retard, speed

The crawfisherman came home with empty traps.

up, or divert the natural flowage. As no new factor was injected in the last pipeline crossing that was not common to them all, this theory was also rejected.

"Some fishermen in the audience expressed the belief that the water in the Henderson area was becoming increasingly stagnant as a result of a southward extension of the levees along the Atchafalaya river. These men were convinced that a current is essential to their industry and proposed the erection of a watergate at some suitable point to provide the necessary moving water. This suggestion contradicts the preceding.

"In this connection, it was revealed at the office of the U. S. Engineers, that before 1948, the west levee along the Atchafalaya ended 14 miles below Krotz Springs. That year it was extended an additional 10½ miles southward. If this was the cause of the crawfish shortage, it should have revealed itself at an earlier date, not eleven years later.

"If a stagnant condition is developing in this or other parts of the floodway, then it must be attributed to natural causes, such as the development of alluvial deposits along flowing channels (see section below). This could conceivably force the best crawfish-producing territory to shift downstream, but is not likely to cause a sudden decrease of the species in the "stagnant water" and "moving water" areas alike. It would appear that factors applicable to both of these environmental types would be involved in the crawfish shortage.

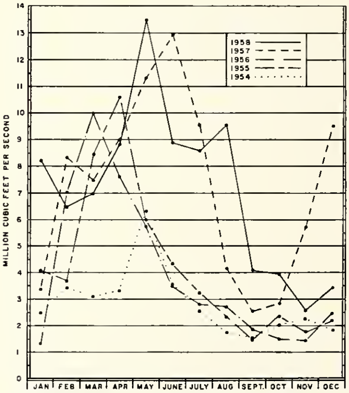
"A theory has been expressed that accumulations of river sand were covering the former mud bottom upon which crawfish thrived. The suggested remedy was to check the currents which deposit the sand. This would mean a further extension of the Atchafalaya levees, exactly the opposite view from that expressed in the preceding statements in this report. I cannot concur in this view because the same currents which deposit the sandy ridges and bars, also deposit silts and clays over considerably larger areas, a characteristic of alluvial streams. Besides, numbers of times in the past, I have witnessed an abundance of crawfish wherever crevasses occurred along the Mississippi system. They were captured in large quantities whenever the Bonnet Carre spillway was operated. The extensive sandy deposits which formed in such places were far from detrimental to the versatile red crawfish.

"It has been noted that the more specialized "white" or "river crawfish" was absent from the recent catches in the floodway. This species is normally found in sandy deposits along "moving" streams throughout the state. If sand was the basic cause of the decrease of the red species, it would be followed by an increase of the white, whereas the opposite is true.

"Some members of the Henderson audience believed that ibises, egrets, herons and wood ducks took a heavy toll of the crawfish population. They suggested shooting the excess bird population. Why had not the effects of this form of predation become apparent sooner? These waterbird populations do not vary much from year to year. It would seem strange, then, that they should suddenly become a serious factor only after a period of unusual high water during which the birds would find it harder to get at the crawfish.

"Fishermen in the audience mentioned an unusual abundance of polywog catfish (yellow bullheads). I, too, noted that they were plentiful all over the floodway. Two other species of catfishes (the blue cat and the eel cat) and the fresh water drum (gaspergou) were being harvested by commercial fishermen in unusual quantities. Bits of crawfishes were found in stomachs of the last named species. Game and pan fishes, which also feed on crawfishes or compete for their food supply, were also plentiful. In studies made by me in 1948 and 1950, these fish were not in evidence in the crawfish areas.

"I mentioned the presence of other natural enemies, such as bullfrogs, turtles, watersnakes, and alligators; also those clever or highly specialized creatures, such as the racoon and the "congo eel", which are adapted for capturing crawfish in their underground hideouts. Even if it were possible to



MONTHLY DISCHARGE ATCHAFALAYA RIVER
SIMMESPORT, LA.

Monthly discharge data for the Atchafalaya River at Simmesport, Louisiana, during the years 1954 through 1958. Note that the normal cycle of spring flood followed by summer drouths was interrupted to some extent during 1957 and drastically during 1958. In the latter year, the water did not go below the level of the swamp floor, favoring fishes which feed on crawfish or destroy their food supply. This prevented the crawfish from "digging in" for protection.

control all of these enemies by our costly methods, the crawfish would soon become so plentiful, and the food supply so sparse, that they would resort to cannibalism and thin themselves out to the carrying capacity of the environment, or as they say in the cattle country, 'to the carrying capacity of the range'. We would soon be back where we started, but with more taxes to pay.

"Shocking machines were mentioned, both pro and con. Those on the con side of the controversy believe that shocking machines kill everything in the swamp. Those on the pro side believe that they do not kill anything, but disturb the balancing organs of catfishes, rendering them temporarily helpless and easier to capture. They find it hard to understand how the harvesting of catfishes in any manner, illegal or otherwise, could bring about a reduction of the crawfish upon which they prey.

"It was suggested that too much drainage was the cause of the crawfish shortage. Actually there is no artificial drainage system in the floodway. However, drainage has certainly effected the crawfish populations in many other lowlands, thus reducing the overall statewide production.

"While on the subject of drainage, I pointed out that water draining from some thirty states and three provinces of Canada flowed into the Gulf through the Mississippi system. During the calendar years 1957 and 1958, nearly one third of this water found its way through the Atchafalaya. Viewed from this angle, drainage would effect the crawfish situation, but only through the floods it causes, as I will explain later. The building of the spillway was the result of a huge drainage problem, and the solution of this very problem gave us the deepwater crawfish industry in the first place.

"A discussion on insect control measures was divided into two phases, the local poisoning of fire ants, and the application of poisons for the destruction of farm and forest pests throughout the Mississippi valley. The latter can be ruled out because there has been no sudden change in the practical application of such poisons during the past two years.

"It was reported that there had been a recent extensive application of poison by means of helicopters for the purpose of destroying fire ants on the spillway and Atchafalaya river levees. Some of this could make its way into the floodway, but the effects would be largely local, and only a small per cent of the total crawfish-producing area would be involved. It must be remembered, too, that hundreds of thousands of cubic feet of water are moving through these swamps every second, and the dilution factor is extremely great. Nevertheless, the possibilities of toxicity to aquatic life from agricultural poisons should be given further study.

"A theory that overfishing caused the catfish shortage was based largely on reports that female crawfish with eggs attached were sometimes seen in the catches, and that the future crop was being decimated as a result. A closed season was suggested.

"In the samples collected or seen at dealers during the month of May, not a single egg-carrying female was observed. Forty females in a random sample of 100 specimens taken to New Orleans for study were dissected. All eggs were immature, and the best developed would perhaps require more than a month to reach maturity. With rare exceptions the crawfish egg-laying season begins about the time of the summer solstice and lasts mainly throughout the summer.

"There were 60 males in the sample studied, exactly 60%. Ten of these, or 16.6% of the males were in the superannuated state, in which the outer shell is dark and the flesh and internal organs emaciated. These males were no doubt left over from last fall and had by now exhausted their capacity to mate. Such weakened individuals were usually discarded by the fishermen or the pickers. Ten of the males in the sample were pre-adult (adolescent), and forty had attained full sexual maturity.

"In suggesting legislation, we must distinguish between the egg-laying season and the mating season. The mating season is much earlier in the year, beginning in the spring and continuing as long as additional young females attain maturity. However, left-over females from the preceding year seem to mate periodically from time to time.

"I was asked if I would favor a closed season. I pointed out that during a normal year, when the swamp goes dry, there is a natural closed season and no necessity for a law. Also, in the fall, the young are not commercialized because they are too small, too soft, and the mortality is high. I further pointed out that the crawfish crop must be regarded as an annual one. Most individuals in the commercial catch are not much over six months old and are either adolescents, or adults which have just attained maturity. As old adults are not fit for human consumption and do more good as food for wildlife, a closed season beginning about July 1st would not only protect the spawn, but would keep this inferior product off the market.

"If extended through the fall months, a closed season would protect the eggs whenever the mothers are driven from the protection of their hiding places by high water, and later would protect the little fellows from commercialization. The customary three-quarter inch mesh now used in most traps and nets is most helpful in protecting the young from commercialization, and no harm to the industry would result if a mesh under this size is declared illegal.

"I went on record, however, that I did not believe that overfishing played any part in the crawfish decline because it was too sudden. Furthermore, most of the fishermen in the floodway state that, during a normal year, they harvest only a small percentage of the crawfish actually present in the swamp as a whole.

"At the aforementioned Henderson meeting, I did not go into an extensive discussion of the natural causes which might effect the crawfish crop one way or another. I did state that possibilities and probabilities existed, and that the recent decline might be just another example of one of those cycles of nature which we have come to recognize in recent years.

"I mentioned again that the original increase of the crawfish population in the Atchafalaya floodway was the result of man-made changes, but that subsequent fluctuations seem to result from natural causes. Of course, we have no control over the cycles

(Continued on Page 21)

Beaver in Louisiana

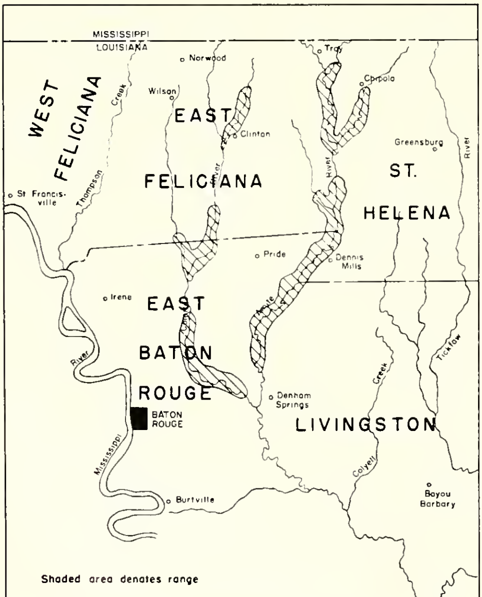
Kenneth C. Smith

Game Biologist

Flooding due to beaver dam, in Beauregard Parish, April 1958.

The Louisiana Wild Life & Fisheries Commission has been trapping and restocking live beaver since 1939, but until recently there has been no attempt to evaluate the results of this program. Suspicions have been growing for some time that the distribution of these animals over the state could very well multiply the problem now being experienced in the Florida Parishes i.e., those parishes east of the Mississippi River and north of Lake Ponchartrain.

With this possibility in mind, a study was designed in 1957 by Commission personnel and instructors of the graduate school of game management at L.S.U. which would serve to guide future policies on beaver restocking over the state. This work was undertaken by Robert Noble, at that time a game management graduate student, and completed in 1958. The Louisiana Wild Life & Fisheries Commission, through the Pittman-Robertson Section, financed the study.



Shaded area denotes range

RANGE OF BEAVER IN LOUISIANA, 1931

(After Arthur, 1931)

The beaver was a very instrumental factor in the early exploration and settlement of vast areas of the United States and is automatically associated with such familiar names as the "Hudson Bay Company", "Lewis and Clark" and many others. Beaver pelts were in such demand they were often used as a medium of exchange, and trapping pressure became so heavy these animals were virtually eliminated from much of this range. In Louisiana, the only areas known to contain beavers as late as 1931 were the Amite and Comite River drainages in parts of East Baton Rouge, East Feliciana, St. Helena and Livingston Parishes. Here they were protected by local citizens.

When low pelt prices caused a considerable lessening of trapping pressure, this small population began to expand at a very rapid rate and by 1938 beaver damage complaints were common. At that time trapping and transplanting was begun by the U. S. Biological Survey, now known as the U. S. Fish and Wildlife Service. The Louisiana Wild Life & Fisheries Commission assumed this responsibility the following year, working through the Predator Control section. In 1953, the program was transferred to the Pittman-Robertson (Federal Aid to Wildlife) section. Only one man was employed to alleviate beaver complaints and though he could give some local assistance by trapping a number of the animals causing trouble, he could not make a dent in the entire population.

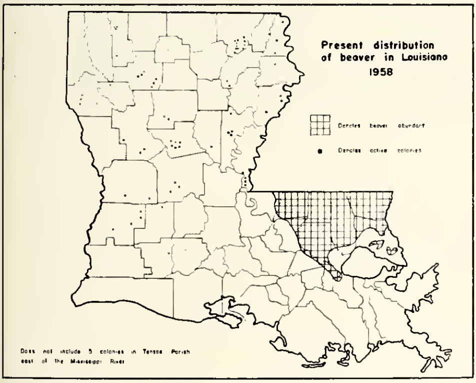
In the beginning of the trapping and transplanting program, the releases were made in a somewhat haphazard manner. The trapper was required to remove the animals from the trouble site but it was primarily up to him to find a place to turn them loose. It wasn't difficult to find some one who wanted releases on his property so the nearest request usually got the beavers. There was no way of knowing at that time that the animals might fail constitute a desirable addition to the natural resources or that they could seriously damage timber and other property.

Beaver restocking was done on a limited basis prior to 1951. According to miscellaneous records and reports there were at least 34 animals released in the Florida Parishes in the decade prior to 1951. Available information shows 9 releases totaling 41 animals were made between 1951 and 1954, the majority of which were made in sections of the state other than the Florida Parishes, which by '54 had become well populated.

Since May, 1954, accurate records have been available and these show 33 separate releases in 17 parishes totaling 131 animals. This gives a total of 171 animals released since 1951, which were, in general, traceable, and at least 34 prior to that time which were not.

There was an investigation of releases made in three states, Texas, Arkansas and Mississippi, in counties adjacent to the Louisiana line to determine if any of these animals or their progeny had emigrated into Louisiana. Only one of these states, Mississippi, made releases that contributed to the Louisiana beaver population. It was found that at least five beaver colonies became established in Tensas Parish as a result of releases made in Jefferson County.

The beaver distribution investigation showed that beavers occur abundantly in nine parishes of the state and one or more colonies are found in each of 23 other parishes. Therefore, 31 of the 64 parishes of Louisiana now support one or more beaver colonies, and 10 of the parishes without beavers are composed almost entirely of marsh and are not suited for beaver habitation.



Does not include 5 colonies in Tensas Parish east of the Mississippi River

Only two of 42 beaver transplants in the state were completely unsuccessful while the status of six remains in doubt. From each of the 34 successful releases from one to five colonies have become established.

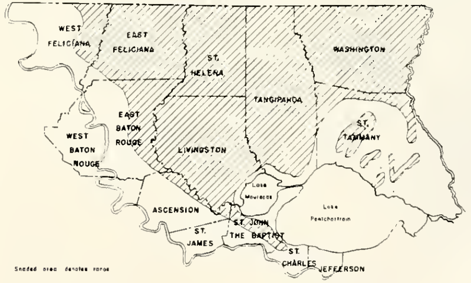
A total of 75 beaver colonies were located within the state west of the Mississippi River. Seventy of these colonies were a direct result of known releases. Five colonies could not be traced to any recorded releases. Most of the colonies in North Louisiana are presently found in Morehouse, Tensas, Bienville and Grant Parishes. As of August, 1958, the estimated beaver population West of the Mississippi River was 500 as contrasted with the 4,000 to 5,000 estimated population in the Florida Parishes.

Beaver gnawing on twig at Bayou Macon, West Carroll Parish.

Though it was a well known fact that beaver were capable of varied and extensive damage, it is still surprising that there were no less than 42 different types of complaints discovered while conducting this beaver study. Not all of these occurred in Louisiana but this state does have an impressive list of its own. A partial list includes: flooding timber, flooding pasture, flooding roads and highways, destroying corn, killing timber by barking and girdling, defacing ornamental trees, tunneling into pond dams and causing washouts, and causing infestation of turpentine beetles by barking pine.

Corn fields in creek bottoms inhabitated by beaver are the source of most row crop complaints. The animals invade the fields heaviest from July through October. The entire stalk is severed near the ground and usually moved to the water's edge. Extensive damage of this type has been observed by the writer in the Amite and Tickfaw River drainage systems. In many cases beaver were blamed for damage actually caused by raccoons.

In selecting dam sites, the beaver can be depended upon to pick the most advantageous spot—from the engineering point of view. Culverts and bridges are placed to permit water run-off, so these narrow outlets are quickly chosen as dam sites. Many complaints of road wash-outs are due to dams of this sort.



RANGE OF BEAVER IN THE FLORIDA PARISHES OF LOUISIANA, 1958

(Continued on Page 22)

SCUBA DIVERS INVADE GRAND ISLE WATERS

Joseph "Jay" Abanese, New Orleans, president of the New Orleans-Grand Isle Scuba Divers International, Inc., is seen above with a 100-pound black grouper he speared off the Continental Oil company oil rig near Grand Isle early this year. Albanese is a member of the BAJAOS, local scuba diving club.

Louis R. Cuccia, New Orleans, another member of the BAJAOS, with one of the barracudas he speared off a Grand Isle rig. Cuccia is going for a record fish at the tournament this month.

Members of scuba diving clubs from all parts of the world have been invited to participate in the First International Scuba Diving tournament to be held at Grand Isle, August 11-13, according to Joseph "Jay" Albanese, New Orleans, president of the New Orleans-Grand Isle Scuba Divers International, Inc.

"Grand Isle was selected as the site for the first truly international scuba competition because of its ideal diving conditions, the abundance of many species record-sized fish, and virtually unlimited diving facilities," Albanese said.

"In addition, the island has long been identified with the lore of the famous pirate, Jean Lafitte. At one time, Grand Isle was the headquarters of this famous buccaneer and many of the native islanders are descendants of Lafitte's brigands.

"Experienced scuba divers from many parts of the United States who have visited Grand Isle claim that the fishing is second to none. Among the many types of fish which may be taken at any time of the year are cobia, jewfish, mackerel, bluefish, barracuda, red snapper, sheepshead, spadefish, amberjack, Jack Crevalle, tripletail, shark, manta ray, black grouper, pompano, tarpon, and many others. Five hundred pound jewfish, 30-pound Jack Crevalle, 30-

J. J. Jones, New Orleans, member of the DIXIE DIVERS, local scuba diving group speared these 20-pound red snappers off Grand Isle where he says spear fishing is the best in the world.

pound snappers and large barracudas are everyday catches. Record-size fish abound.

"More than 100 oil rigs offshore from Grand Isle in the Gulf of Mexico have created artificial reefs which attract millions of forage and game fish. In addition, there are many sunken ships which were torpedoed during World War II.

"The water is clear and warm. Surface temperatures in August are 75-80 degrees — suits are not needed — and visibility is excellent. Arrangements have been made for an unlimited supply of air. There is no need to bring compressors unless you prefer to use your own," Albanese said.

"Adequate boat facilities will be available. Grand Isle is the port of call of one of the world's largest shrimping fleets. In addition, there are numerous charter fishing boats and many high speed "crew boats" which are used to transport workers to the offshore oil drilling rigs. All of these boats are readily adaptable for diving purposes and make excellent diving platforms.

"In addition to trophies, there will be over $15,000 in prizes, ranging from a sports car to a teflon washer. There will be first, second and third prizes for 15 classes of fish. Prizes will also be awarded in a special ladies' division. There will be additional prizes for the largest fish each day and a prize for the largest fish of the tournament. All entrants who submit a fish of any size will be eligible for the grand prize.

"The tournament is open to every diver with a spirit of adventure and the desire to spear record fish and win valuable prizes.

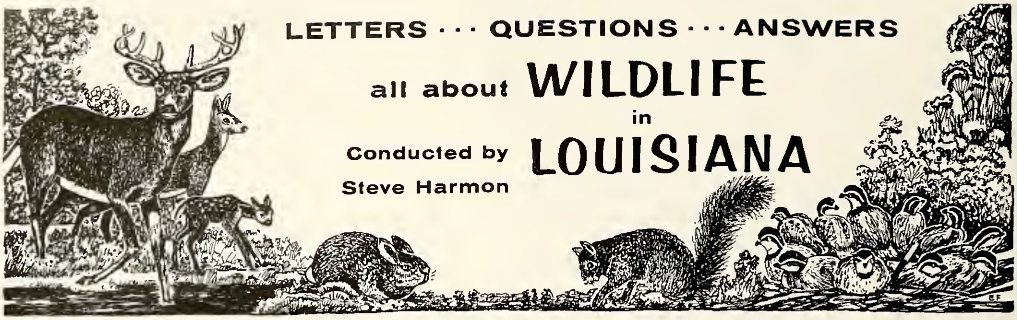
"Competitive amateur team divers are urged to clarify this type of competition with their Regional A.A.U. Director or Chairman before entering, to protect their amateur status.

"Under the rules of the tournament, commercial sponsorship of individual divers is allowed. Perhaps your local sporting goods dealer will wish to sponsor or partially sponsor you in this, the 'world series' of scuba diving.

"The entry fee for the tournament is nominal.

"Diving groups may obtain a 10-minute 16mm sound film of scuba diving at Grand Isle by writing the New Orleans-Grand Isle Scuba Divers International at P. O. Box 127, New Orleans, La.," Albanese said.

Lloyd Bridges, underwater diving TV star and actor John Hall, another scuba diving enthusiast, will be on hand at the tournament along with motion picture photographers from Hollywood, accompanied by representatives of scuba diving publications who will report the event. An attendance of more than 600 persons is expected, according to Albanese.



LETTERS · · · QUESTIONS · · · ANSWERS

all about WILDLIFE in LOUISIANA

Conducted by
Steve Harmon

Dear Editor:

About five miles from Loreauville in Iberia Parish a strange bird was sighted by my father and I. This was in late February. This bird looked very much like a mocking bird. The odd thing about it is that it had extra *long* forked tail feathers, with possibly a black spot on each tail feather which formed the fork, and its breast seemed pinkish in color. The top side a dark grey. I am also sending you a specimen which was found in the stomach of a fresh water bass. Please identify. Thanking you in advance, I remain—*Albert Mestayer, Loreauville, Louisiana.*

> *Your letter of May 21, 1959 has been received.*
>
> *The bird referred to is called the Scissors-tailed flycatcher and its technical name is Muscivora forficator.*
>
> *The specimen you sent in to us has been identified as the Pipefish and its technical name is Syngnathus sp.*

NAMED EDUCATION CHIEF

Stephen H. "Steve" Harmon, of Waterproof, Louisiana, former college athlete and well-known sportsman, has been made Chief of the Education and Publicity division of the commission. Harmon is a former general manager of the Natchitoches Chamber of Commerce and once published the newspaper in that city.

Dear Editor:

In regard to an article on Rabbits in Louisiana by Robert Murry & Jack Sims in the May-June issue of the Louisiana Conservationist.

In the article they were having a slight problem on counting the rabbits in certain parishes, well I have the solution, "COUNT THEIR FEET AND DIVIDE BY FOUR (4)". Sincerely—*R. D. Bozeman, Jr., 2425 Rose Street, Lake Charles, Louisiana.*

Dear Editor:

First I would like to take this opportunity to salute the Wild Life and Fisheries Commission for the wonderful work they have done and are still doing to preserve the natural resources of Louisiana.—*Charles Hemphill, Rt. 2, Aubin Lane, Baton Rouge, Louisiana.*

Game agents Edward C. Tassin (left) and Alfred F. Couvillion, of the law enforcement division of the Louisiana Wild Life and Fisheries commission, are seen with two of the 16 hoop nets they confiscated in Concordia and Avoyelles parishes. The agents dumped about 300 pounds of white perch they found in the nets back into the water.

Dear Editor:

Just received your fine April "Conservationist" and noted with particular enthusiasm the outstanding catches pictured in the centerfold. Having acquainted myself almost to the point of irreparable exhaustion with the Pelican state's wide and wonderful outdoors during a tour with the Navy at Algiers, I feel compelled to speak through your publication if space permits and with allowance for the fact that I am not a resident of Louisiana.

This unfortunate deficit, however, by no means exempts me from practicing conservation outside the boundaries of my native state, nor from commenting on same on occasion. In addition to the entertainment value which I derive from your publication, I note with satisfaction that basic content and policy adheres closely to its title, that of conservation for and by the residents of Louisiana. Fortunately, yours is a state which can boast in relative certainty of possessing a native population of which perhaps 50-75% are active hunting and fishing enthusiasts, the majority of these in turn being true sportsmen and therefore active conservationists in the most meaningful sense of the word. Other states, which attract each year large numbers of carefree tourists who give little or no thought to subsequent generations of sportsmen, have a very difficult conservation problem. Although it's a highly improbable thought, native Louisiana sportsmen can be thankful that Mardi Gras is bound by tradition to the confines of the French Quarter and not to Bayou Boncau or some such spot.—*Earle S. Welch, Journalist 2nd Class, U.S. Navy, Roosevelt Roads, Puerto Rico.*

Kenneth Ray Johnson of Athens, Louisiana (back row, third from left) has been awarded the $4,000.00 Forestry Scholarship by the Woodlands Division of Continental Can Company at Hodge, Louisiana. Kenneth Ray was among eight outstanding students who had been previously screened to compete for this award. The eight outstanding applicants were, front row, left to right: Marlin W. Deen, Atlanta; Elton C. Mitchell, Many; Thomas E. Walker, Jr., Haughton and Charles C. Dyess, Marthaville. Back row, left to right: Jimmy David Barnes, Atlanta; Lesh Nettles Brown, Coushatta; Kenneth Ray Johnson, Athens and William W. Weaver, Chestnut.

Marsh Island Wildlife Refuge

Future management at the Marsh Island Wildlife Refuge will include the installation of a number of additional low water sills in the marshes. Indications thus far from those installed in the past year are that food conditions were improved for waterfowl over 6,300 acres of marshes, lakes, and ponds. Recent job completions at Marsh Island include the building of a 50 ft. x 60 ft. metal boathouse, the construction of a 700 ft. long bulkhead around the headquarters fill, the removal of the old headquarters camp, the intallation of five water control gates in the levee around the 8,000-acre wildlife impoundment.

Rockefeller Wildlife Refuge

Hurricane "Audrey", in 1957, washed out miles of levee around the Refuge's 18,000 acres of marsh impoundments. Four commission-owned draglines, working steadily since the storm, succeeded in closing the last break in over 100 miles of marsh levee last month. The marshes on the Refuge were heavily used by hundreds of thousands of ducks during the past winter. The Rollover Bayou salt water control structure has been added to, fully repaired, and is now operating again. Bids are being secured for the installation of a salt water control structure in the canal near the East End Camp, an office and laboratory and three other buildings at the main headquarters, and a seaplane ramp.

BIOLOGISTS ELECT OFFICERS

Officers for the Louisiana Biologists Association for 1959 were elected at their first meeting held at Baton Rouge. The new group is composed of wildlife biologists working in the State of Louisiana and its principle objectives will be to establish and maintain high professional standards in the field of wildlife management and to develop all phases of wildlife management along sound biological lines, Louis Brunett, of Alexandria, who was elected chairman, said.

Other officers elected are: Vice-Chairman—Fred Deiler, Port Sulphur; Sect.-Treas.—Herbert Stern, Baton Rouge; also in addition to the above three officers, the Executive Committee includes Joe Herring, Monroe, Past Chairman, and Morton Smith, New Orleans, Past Vice-Chairman.

Named to the various committees were: Program—Robert Lafleur, Baton Rouge; Robert Kimble, Minden, and Carl Thomas, Crowley; Fish and Game Laws—John Newsom, Slidell; Ted Ford, New Orleans; Vic Lambou and Kenneth Biglane, Baton Rouge; Membership—Fred Deiler; Joe Herring; Dan Dennett, Alexandria; Charles Shaw, Slidell; Vic Lambou; Wildlife Extension—Herbert Stern, Robert Lafleur and Carl Thomas; Resolutions—Kenneth Smith, Baton Rouge; Dan Dennett; Morton Smith; Kenneth Biglane; Max Summers, Alexandria.

KITCHENS RESIGNS FORESTRY POST

J. H. Kitchens, Jr., executive director of the Louisiana Forestry Association left his post on June 1st to enter private employment with the Forestry Division of T. L. James & Co. in Ruston. The announcement was made by the Association's executive committee, according to Vertrees Young, president.

Kitchens will assist Don Burkhalter in directing the James Company's far-flung reforestation program all over Louisiana.

Game agent Alleway Dupuy of Avoyelles parish is shown with a morning catch of chinquapin and bluegill perch from the waters of Spring bayou. The bull bream were caught by Rep. Alton de Nux of Marksville.

Enforcement Chief

Julius L. Book has been named Acting Chief of the Law Enforcement division of the Louisiana Wild Life and Fisheries commission to succeed Rudolph P. Easterly, now director. Captain Book, besides being one of the most widely known law enforcement officers in the state, is the possessor of a vast knowledge of its inside shrimping waters. He joined the commission in 1926 and has been connected with it continuously since, with the exception of the four years he was with the armed forces.

Fish and Game Chief

Theodore "Ted" B. Ford, former Office Chief of the Division of Fish and Game, has been appointed Acting Chief of that division. Ford, a graduate of the University of Mississippi in biology, did graduate work at the University of Illinois, in zoology and physiology, and has been with the commission since 1954.

He formerly conducted physiological research for the Biloxi Oyster laboratory. He is a veteran of World War II, where he served as captain of infantry and was decorated with the Croix de Guerre with palm leaf, and twelve other medals and citations.

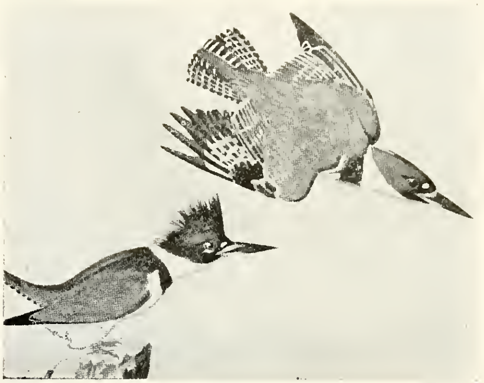
Fish. Game Chief Resigns June 30

The resignation of John Sherman Campbell, chief of the Fish and Game division of the Louisiana Wild Life and Fisheries commission has been announced by Rudolph P. Easterly, director.

Campbell, who leaves the commission to enter private business where he will operate an Esso service and shopping center at 7615 Jefferson Highway in Baton Rouge, has been with the commission since 1940. Before joining the commission, he taught school at Ainsley, Hodge, and Gibsland and served as principal of the Bienville high school. Later he joined the staff of Louisiana State University as wildlife specialist for the Agricultural Extension service. A native of Ouachita parish, Campbell said on his retirement, "I'm still going to do my share of fishing."

JOHN S. CAMPBELL

An Avian Oddity



EASTERN BELTED KINGFISHER

Megaceryne alcyon alcyon

Hannah Yates

THE EASTERN BELTED kingfisher has been well named as the "Izaak Walton of Birddom" for he knows every pool where the minnows play, every projection along the bank where a fish might hide, and is ever on the alert, no only for dinner but also to escape from the human being who might intrude on his domain.

About one-fourth as large again as a robin, its length is from 12 to 13 inches. The male's upper parts are grayish blue and the head is notable for its very prominent crest which reached to the nape of its neck like an Indian Chief's war bonnet. It has a white spot in front of its eyes and its bill is longer than its head which is large and heavy. It wings and tail are minutely speckled and marked with white broken bands and its chin band and around its throat and underneath are white. The kingfisher's mate, however, and its children, wear a rusty band instead of a blue one.

The customary site for the nest is in a bare gravel, sand or clay, bank near the water and close to the top of the bank. Both birds join in excavating a four-inch burrow that runs horizontally from three to 15 feet at the end of which is dug an enlarged space for the nursery. Ultimately five to eight white eggs are laid on a crude nest covering of fishbones, scales, twigs and leaves. However, if you are wise you will not go poking around when the old birds are home for you will undoubtedly get a painful nip from a very formidable bill.

Whatever way you look at it the kingfisher is interesting but odd, big-headed, short-tailed, weak-footed, and looks like a tousled monstrosity. It haunts the streams, lakes, and ponds and the inlets of the coast and interior, wherever it is able to find a suitable expanse of water, and wherever it is likely to find the food on which it lives. It flies rapidly and with an intermittent beat of the wings, which make it readily identifiable. It is rarely if ever, seen in flocks, but singly and in pairs it patrols the waters. The eastern belted kingfisher is a fairly common permanent resident over practically all of Louisiana; but in the southern part of the state it is much more numerous in the winter than in summer. It breeds from March to May and there is a record of eggs taken on April 16.

An expert flier and diver he is also a fearless defender of his home and the last word in self-reliance. Although the kingfisher comes well by his name as being a fisherman and by the French is called "Martin Pecheur." This bird besides eating fish, also eats fruits and berries, various types of crustaceans, together with large insects such as grasshoppers, crickets, and beetles as well as other animals as lizards, frogs and even mice.

Usually a lone-wolf type of bird, except in mating season, he has his favorite fishing stations and will sit motionless on an overhanging branch with his sharp eyes scanning the water for an unwary fish. Then at the opportune moment he plunges down headfirst; often going down completely under water and emerging with a minnow or other small fish gripped in his strong oversized bill, his oily feathers shedding water like a duck. At other times he will fly over the water and when sighting a meal will hover briefly and then dive like an arrow. If he misses his catch, he will let go with a rough, harsh cry likened to the sound of a wooden whirligig rattle that children swing vigorously when they reach the noise making stage.

Scientists say that birds are the descendants of reptiles, that feathers are modified scales and that a bird's song is a glorified hiss of his ancestors. In one respect the kingfishers, at least, retain one ancient reptilian custom in that they still place their eggs underground. While his queen broods, the king, being a devoted mate brings the best of his catch to her. When the babies are bare and skinny the father and mother fly up and down the stream in search of food for them and when returning home they sound their "rattle" and the young rush forward through the tunnel.

However, only one bird is satisfied at a time, then all back up through the tunnel in tandem and keep tightly huddled in the nesting chamber until the next feeding trip. Both parents are always on the alert and ready to drive off predators such as mink, rats, and water snakes which constitute the main threat to an otherwise surprisingly well regulated household.

James N. McConnell, chief of the Oysters, Water Bottoms and Seafood divisions of the Louisiana Wild Life and Fisheries commission, shows how the clam shells planted by the commission have taken on spat thus promising a bumper crop of seed oysters. Seen inspecting the shells are: (left to right) commissioners Alton M. Holden and John Cutrone, Dr. Lyle St. Amant, marine biologist, Rudolph P. Easterly, director of the commission, McConnell and E. R. McDonald, chairman of the commission.

EXPECT BUMPER OYSTER CROP

James N. McConnell, Chief of the Oysters, Water Bottoms and Seafood division of the commission, has reported a tremendous increase in oyster production in Louisiana is expected from shell planting operations in Black bay in Plaquemines parish, and in the vicinity of Petit Pass island, Half Moon island, and Little Raccoon island in St. Bernard parish.

McConnell and Dr. Lyle S. St. Amant said that some 350,000 barrels of clam and oyster shells have been planted in the designated areas. It further was reported that 92% of the clam shells in the Black bay area already have taken on spat and promise to produce a fine crop of seed oysters. The clam shells were planted several weeks ago, it was explained.

Barring unforeseen eventualities, according to Dr. St. Amant, if the tests continue to prove successful, a bumper crop of seed oysters will be developed within 15 months. The seed oysters then will be available to oystermen for transplanting on their own bedding grounds.

The areas being planted by the department will be closed to oyster fishing until at least September, 1960, it was pointed out. McConnell also said that Mississippi oyster factories have returned—without cost to the commission—200 barrels of steamed oyster shells for each 1000 barrels of oysters taken in Louisiana waters. Those shells are being planted in the Little Raccoon island area, he said.

In 1956, according to McConnell, the commission planted 50,000 barrels of oyster and clam shells. From beds thus created, 150,000 barrels of seed oysters were produced.

Study Being Made On Artificial Reefs

At its regular monthly meeting June 23, the commission appointed a committee to study the proposal of building artificial reefs to attract more game fish off the Louisiana coast.

Named were commission member Alton M. Holden; Dr. Lyle St. Amant, marine biologist; Harry Schafer, supervisor of the commission's freshwater fishing division, and Ted B. Ford, acting chief of the Fish and Game division.

Members of the commission noted that offshore oil rigs in Louisiana waters have made excellent artificial reefs and have attracted large numbers of game fish.

Some members suggested the use of concrete in building the reefs. This would assure a fixed reef, it was pointed out, and eliminate the possibility of bottom rolling due to erosion. Concrete would be preferred, members said, rather than junked automobiles and other metals used in some other states.

Commission chairman E. R. McDonald said sites of reefs would be known to shrimp fishermen so that they could avoid damage to their nets.

ALLIGATORS

(Continued from Page 3)

One of the complaints that Rinow, as a manufacturer, has against the trappers is the fact they frequently stretch alligator skins in order to produce an extra inch or two in length. The hides are paid for by the foot and a skin usually a little less than six feet can be stretched to this length. While the trapper may get a little more by carrying out this measure, the stretching separates the scales or plates and greatly reduces the quality of the skin. This is one practice that Mr. Rinow would like to see abandoned inasmuch as it is harmful to the industry as a whole.

A substantial drain on the alligator population in our state stems from the sale of the baby saurians as pets to tourists and others, Rinow says. Rinow also produced from his files a diminutive alligator skin for which he said the trapper got seventy cents. "In three and a half years this same animal's hide would have brought seven dollars if the trapper had only let him alone to grow" he says.

One of Rinow's primary worries is that a continuous supply of skins will not be available in quantity in the future. He would like to see the harvest of alligators more properly regulated in order to insure a sustained yield for the future.

To provide adequate safeguards it would appear that this could be most readily done by additional legislation. A five or six foot size limit instead of a two foot limit as it is now would provide an opportunity for the females to reproduce. Protection from mid-June to the end of August would also give them an opportunity to bring off young during the summer months. Under this type of management the alligator population would most assuredly build up. Since nucleus breeding stocks are available throughout their range in the coastal areas it is doubtful if a closed season will ever be justified.

Maxililian Rinow, president of a company which manufactures alligator and shell cordovan products in New Orleans is in favor of closed seasons and size limits for alligators. "Just to think," he says, "this little fellow in my right hand who was sold for seventy cents would have been the size of the one in my right hand if the trapper had only allowed him to grow another three-and-a-half years and would have been worth seven dollars."

Although limited in size it is just one more of Louisiana's many resources that should receive more attention. Apart from many of the others it is one in which the supply does not appear to fulfill the demand.

CRAWFISH DECLINE

(Continued from Page 11)

of rainfall and drouth in the Mississippi drainage area, but as man is building dams and other water conservation structures on an unprecedented scale, these should bear watching, as they could be effecting some of the cycles of nature, sometimes to the good, but maybe not always.

"Figures gathered at various landing points at which crawfish are bought from the catchers and packed for shipment, seem to indicate that our statistical section is not getting the records of much, if not most of the crawfish catch. At Henderson alone, some two million pounds are landed during a normal year. This figure, for a single village, is considerably above the total statewide production according to figures taken from the records of this commission. It must be pointed out, that unless *correct* statistics are available to the biologist, they are of no value at all, making it impossible to determine the extent of the "ups and downs" in production and to properly evaluate them.

"Certain biological facts revealed during the investigation gave clues to the underlying causes of the crawfish decline and aided in ruling out most of the proposed theories. Some of the more important are discussed below.

"The first was the crab shortage and its possible cause. Female crabs must go down to the sea to spawn. Baby crabs, when less than a quarter inch across the back, begin their migration into estuarine waters. If they do not find water of low salinity, their chances of survival are very slim.

"With food plentiful and free from their natural enemies of the sea, crabs thrive and grow fast in these nearly fresh nursery areas. Sometimes large populations are produced at considerable distances from the spawning areas. The males do not return to the sea, but mate in the estuaries, where they remain until they die from old age or other natural causes.

"There happens to have been no shortage of spawning female crabs along the Louisiana coast in recent years. Therefore, the disappearance or serious decline of an inland population simply means that esturaine conditions have been superceded by fluvial conditions. An uninterrupted flow of water from a large river such as the Atchafalaya would effectively prevent the inward creep of sea water, during which period the older crabs would no longer be replaced by young migrating in from the sea.

"The absence of white river crawfish, *Procambarus blandingii*, has been noted. This could either mean lack of oxygen in the habitat in the fall or spring when they are in the water, or lack of exposed bars or banks in which to burrow during the summer egg-laying season, or a combination of both. The red swamp crawfish, *Procambarus clarkii*, can withstand low oxygen levels much better than the whitish species, so there would be a greater survival of this more versatile species under stagnant back swamp conditions.

"A preponderance of males amongst the red crawfish population has also been noted. After reaching the adult stage, male crawfish forever lose their power to shed from time to time, but the females do not. As the soft shells are helpless and suffer most, the males would be less apt to fall prey to predatory fishes. A preponderance of males in the adult population at this season, would seem to indicate selective removal of proportionately more females by an excessive fish population which survived the summer of 1958 when the back swamp areas remained under water.

"The excessive population of young polywog catfish (yellow bullheads) ties in well with the preceding. As the last year's hatch of polywog catfish would have largely succumbed had the swamps gone dry last summer, their present abundance indicates that conditions were favorable for them throughout the past year.

"Another factor has been a temporary change in the runoff cycle of the Atchafalaya river. The normal runoff cycle of the Atchafalaya, as determined from the Simmesport gauge readings, consists of a moderate flow during the winter, a rise to a crest during the spring, followed by a more or less rapid decline, then a low water period extending through the summer and sometimes through the fall.

"The life cycle of the red crawfish seems to be geared to this normal weather cycle of spring flood and summer drouth. When swamps go dry, the adults "dig in" for the season. While the females are thus estivating in their little caverns and tunnels at the underground water level, their eggs are laid. They are attached to the filamentous appendages under the abdomen of the mother, and she can aerate them at will. While the mother crawfish and their eggs are thus protected underground, their competitors and aquatic predators are engaged in a severe struggle for existence while concentrated in the drying pools and water holes.

"The swamp trees, which drink up water at a rapid rate during the summer, are less active water consumers during the fall. The evaporation rate from open water surfaces also slackens considerably. Even when there is no rise on the river, the local equinoctial and fall rainfall is generally sufficient to raise the water level above the swamp floor, and small pools are formed everywhere. Normally these are devoid of fish, which succumbed during the summer drouth. The female crawfish now come out of their hiding places at night and release their recently hatched young in these newly-formed pools. Here they grow rapidly during the fall months. When the rising river brings in new sources of food, their growth continues, even throughout the winter, and many are ready for market by February or March.

"If we examine the flowage data for the Atchafalaya river, we find that a very unusual variation from the normal annual cycle occurred during 1958. The water actually rose rapidly during the fall of 1957, cresting in December of that year. It remained high throughout the winter and spring of 1958, cresting again in late May. The water remained very high throughout the summer of 1958, a most unusual situation, and no doubt the big variable we have been looking for.

"As a result of this unusual summer high water, the female crawfish could not "dig in" at all during 1958, except along the levees and perhaps some high ridges in the floodway. Although the water level went down in September 1958 and remained low throughout the fall, the swamp did not go dry. This could have resulted in the stagnant condition referred to at the Henderson meeting, a condition adverse to the survival of the white river crawfish but favorable to the polywog catfish. These latter can survive by skimming the surface for air, even when the oxygen level goes down to zero.

"Crawfish, under stagnant conditions, are compelled to expose their gills at the surface from time to time to secure the needed oxygen. This exposes them to natural enemies which feed from above. Besides the waterbirds, the bullfrog becomes a voracious predator under these conditions. One frog can devour three or more large crawfish in a single night, and as many as a thousand eggs or young still attached to their mother's "apron strings."

"The facts revealed in this survey render untenable most of the proposed theories as to the cause or causes of the recent crawfish scarcity in the Atchafalaya floodway. Some of the theories are at best local in application. Others do not apply because their status did not change materially since the last crawfish mating season and therefore could not influence the last crop of young which made up the bulk of the catch during the spring of 1959.

"The following theories were rejected, namely: *water too cold*; *too much water*; *stagnant water; sand deposits*; *waterbird predation*; *shocking machines; too much drainage*; *insect poisoning; overfishing; water hyacinth spraying*; and, *oil field wastes.*

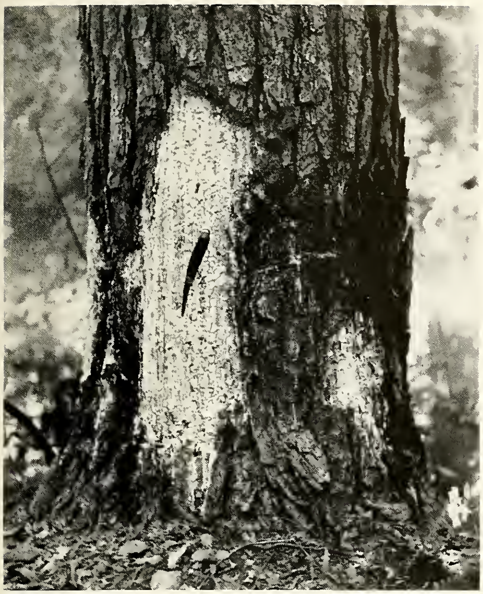
"Therefore, three variable factors remain which do apply to the floodway considered as a single environmental unit: (1) The *river discharge* through the floodway; (2) The *food supply*; and, (3) The *aquatic predator situation.* These can be integrated to form a simple explanation of the crawfish scarcity of 1959 as was pointed out earlier."

BEAVER

(Continued from Page 13)

Farm ponds are readily adopted as colony headquarters. Here is a ready made water supply and all that is lacking are burrows for denning purposes. Here the dam offers sharply sloping sides that are ideal for tunneling, so in goes Mr. Beaver and in comes the complaint. Cattle and machinery crossing the dam break through into the excavations. Some tunnels go right on through the dam with the resultant washout causing damage to the structure and lowering the water level in the pond.

The most frequent complaint is that of flooding and killing timber. A 100 percent cruise was run on timber killed by flooding at three locations in three parishes. It was determined that a total of 28,289 board feet of oak, loblolly pine, sweet gum and blackgum, worth $515.00 on the current market, had been killed. The above figures were determined from trees 5 inches DBH (diameter breast high) or larger. On 4.5 acres of flooded land in St. Tammany, the kill on trees less than 10 inches DBH was 6.9 cords while the kill on pines 10 inches and larger was 20,674 board feet. This timber was worth approximately $700.00.



Loblolly pine, 20 inches in diameter, barked by beaver. Tangipahoa Parish, April 1958.

Another serious type of damage is that of barking and girdling trees. Rot ruins many hardwood trees from which bark has been removed by beavers, and pine beetles will quickly infest pine trees with exposed wood.

It is interesting to note that loblolly was found to be the woody plant species most important to beaver in the Florida parishes. Listed next, in their order of importance, are silverbell, sweetgum, ironwood, and sweetbay. Commission Biologist Robert Chabreck, working in St. Tammany Parish, lists sweetgum, sweetbay, spruce pine and loblolly pine as the most important species.

Based largely on the results of Noble's investigations of the various aspects of beaver populations, and their general economic importance, and on experience gained by personnel of the Louisiana Wild Life and Fisheries Commission, the restocking of live beaver in Louisiana has been discontinued since June 30, 1958.

Louisiana continues to employ a full time trapper to handle complaints. He continues to use the Bailey trap on a limited basis because many of the trap sites are in shallow water where steel traps are not practical. The live traps are large and bulky and used only when necessary. A number of smaller steel traps can be carried by the trapper as easily as one or two live traps.

It is important that the steel trap be of proper size and design. An Oneida Newhouse Number 4 coyote trap with double springs and a jaw spread of 6.5 inches is suggested. However, the Oneida Newhouse Number 14 with double springs and offset jaws and the Oneida Number 48 should work equally as well.

It should be understood that this article is not written for the purpose of sensationalizing the undesirable aspects of the beaver in this state. Some facts have recently come to light and it is believed this information should be made available to all persons interested in the natural resources of Louisiana. The Commission continues to receive requests for these animals but knowledge regarding the nuisance aspect precludes compliance with these requests.

The beaver has many desirable features that cannot be taken from him. There are many ponds created by the construction of the familiar mud and stick dams which attract waterfowl, produce good fishing, provide drinking water for other forms of Wildlife and raise the water table of dry areas. He has these good points and he has bad points, so it all depends on where we're sitting whether we kick him or love him.

BONNET CARRE WORK TO AID AREA SPORTSMEN

Bids were received on July 7, for the construction of the Bonnet Carre spillway canal in St. Charles parish, according to Lorris M. Wimberly, director of the Louisiana Department of Public Works.

The canal is being constructed at the request of the St. Charles parish Police Jury and several sportsmen's organizations. The purpose of this project is to reopen and enlarge the navigation channel connecting the Bonnet Carre borrow pit canals with Lake Pontchartrain. The channel improvement has an approixmate length of 0.44 miles, involving 16,200 cubic yards of channel excavation.

Sportsmen and fishermen from the parishes of Jefferson, St. Charles, and St. John the Baptist are expected to benefit greatly from the improvement of this canal and all engineering services are being furnished by the Louisiana Department of Public Works, Wimberly said.

FISHING AND DANCING LEAD POLL

Results of a recently-announced Gallup Poll indicate that fishing is tied with dancing as the second most popular recreation in the United States. Swimming led the country in 1958 with 33 million participants and fishing and dancing were close behind at 32 million each. Hunting was in fifth place, just behind bowling, with 16 million participants. Yet football, baseball and basketball take up nine-tenths of the sports pages of the American newspapers. Sports editors, take note!

It is with sincere regret that the Louisiana Wild Life and Fisheries commission announces the deaths of three of its most esteemed employees and wishes to express its deepest condolences to those whom they have left behind.

Departed are:

John Emile Cummins, accountant clerk for the Oysters, Water Bottoms and Seafood division.

Captain Philip J. Trosclair, of the Albacore.

George C. Tregre, Waste Disposal inspector for the Division of Water Pollution control. Mr. Tregre had retired from the commission in March of this year.

Shown in the above photo are Jesse M. Sanders, Captain Leonard New, Leroy "Slick" Seal, and Levert Strahan of the Louisiana Wild Life and Fisheries commission looking over a five-bar telephone, 22 rifle, large dip net and a headlight which were confiscated from Wiley E. Creel, 24, and James E. Burch, 26, four miles south of Franklinton on the Enon Highway.

Fish Shockers Caught On Bogue Chitto River

Following a two week sleuthing operation, on the Bogue Chitto river in Washington parish, by Captain Leonard New of the law enforcement division of the Louisiana Wild Life and Fisheries commission, James E. Burch and Wiley E. Creel, both of Franklinton were arrested and charged on two different counts of violating the state's game laws.

The two were charged with having in their possession a shocking machine with which to take catfish and also for catching an alligator in a permanently closed season in Washington parish.

According to New, he first received the information of the catfish shocking operation from residents along the river and upon investigation he discovered the severed heads of catfish on various sand bars in the river showing no hook marks and some of them appearing to have belonged to fish weighing as much as forty pounds. The fish had been apparently taken with the use of an electric shocking device and dressed on the spot.

Under orders from Julius Book, acting chief of the commission's law enforcement division, Captain New and game agents Jesse M. Sanders, Leroy Seal and Levert Strahan secured the descriptions and license numbers of the three cars being used by the fish shockers and set about to trap them in action.

With the descriptions of the cars and equipped with walkie talkies, the men started working down the river, going to each landing and finally they spotted one of the cars, but the owner's boat was not at the dock. The agents waited and finally saw the men enter the car and pulled away. "We let them come out on the highway," New said, "and they paid no attention to our car as I was using my personal car at the suggestion of Captain Book and they did not recognize it. We followed them for a short distance and overtook them and ordered them to stop." The agents piled out of the car and discovered the men to be in possession of a shocking device, wires, a rifle, an illegally taken alligator and bulls eye lights.

"Although they denied shocking fish the men and their equipment were wet all over and the wires and weights were still wet and showed signs of having been recently used. An examination of their boat disclosed two small catfish that bore no evidence of hook marks," New said. "The men admit intending to remain on the river all night and I had already been given the information that the way they operated was to leave the fish tied out in the river and to return in daylight and bring the fish out pretending they had caught them on trot lines," Captain New reported.

Industry Cooperates in Wildlife Program

Over 400,000 acres of privately-owned Louisiana forest were officially opened recently to public hunting, fishing and other outdoor recreation.

Spokesmen of the Louisiana Wildlife Federation described the action as the first project in the new F.A.I.R. Program—Federation and Industry Recreation—under which the National Wildlife Federation will cooperate with industry in opening private lands to sportsmen.

The pilot F.A.I.R. project, the first in the nation, involves forest holdings of the Olin Mathieson Chemical Corporation near Winnfield and Monroe. The 405,000-acre Olin Forest offers squirrel, waterfowl, deer, turkey, and quail hunting, and fishing and boating on several water areas. A 14,000-acre lake, Lake D'Arbonne, is being planned in Union Parish.

Olin-Mathieson spokesmen said that hunting, fishing, camping and other outdoor recreation will be permitted, and that sites of scenic and historic interest will be preserved wherever possible.

James Ledbetter of New Iberia, president of the Louisiana Wildlife Federation, said the Federation will "seek to promote and develop recreation facilities in the Olin Forest and other lands included in the F.A.I.R. Program."

Although specific projects were not named, Ledbetter said they may include—erecting signs on the areas, preparation of maps, and development of picnic sites, boat launching sites, and other facilities.

On the coordinating committee for FAIR (Federation and Industry Program) left to right: Vernon Robertson, Louisiana Forestry Commission; John D. Newsom, Pittman-Robertson coordinator for Louisiana Wildlife and Fisheries Commission; Wesley Sentell, Louisiana Forestry Association; Lloyd Abadie, Louisiana Wild Life Federation, chairman; and A. B. Smith, Conservation Forester, Olin Mathieson Chemical Corporation.

"We hope this pilot project will interest other forest industries in joining the F.A.I.R. Program," Ledbetter said. "There are about 4 million acres of private forest in Louisiana . . . an immense potential for outdoor recreation."

Ledbetter said the F.A.I.R. Program will be directed by a coordinating committee composed of the Louisiana Wildlife Federation, the Louisiana Forestry Association, Louisiana Forestry Commission, the Louisiana Wild Life and Fisheries Commission, and Olin Mathieson Chemical Corporation. *(See location, map on page 26)*

Stites Is Elected to Head A.A.C.I.

Members of the American Association for Conservation Information elected Wilber D. Stites, of the Wisconsin Conservation Department, to the position of president. Stites, who formerly served as first vice-president and secretary-treasurer, succeeds Jack Dyer, of the Arkansas Game and Fish commission, according to Steve Harmon, chief of education and publicity for the Louisiana Wild Life and Fisheries commission, who attended the annual meeting.

Other newly-elected officers of the A.A.C.I. are: Con D. Tolman, Colorado Game and Fish commission, first vice-president; Robert D. Calkins, California Department of Fish and Game, second vice-president; James Keefe, Missouri Conservation commission, secretary-treasurer; and Will Johns, Pennsylvania Game commission, editor. Named to the Board of Directors in addition to Dyer are: R. V. Whelen, Ontario Department of Lands and Forests; Robert A. Dahne, Florida Game and Fresh Water Fish commission; Richard H. Schaffer, Nebraska Game, Forestation and Parks commission; C. R. Glover, Pennsylvania Fish commission; and George Culleton, Illinois Department of Conservation.

The American Association for Conservation Information went on record as recommending expanded information-education programs for certain agencies within the U. S. Departments of Interior, Health, Education and Welfare and Agriculture; endorsed the broad principles of the Junor Chamber of Commerce conservation program; and agreed to join the International Association of Game Fish and Conservation commissioners in attempting to devise an appropriate wildlife conservation symbol.

Catfish Prefer Mud

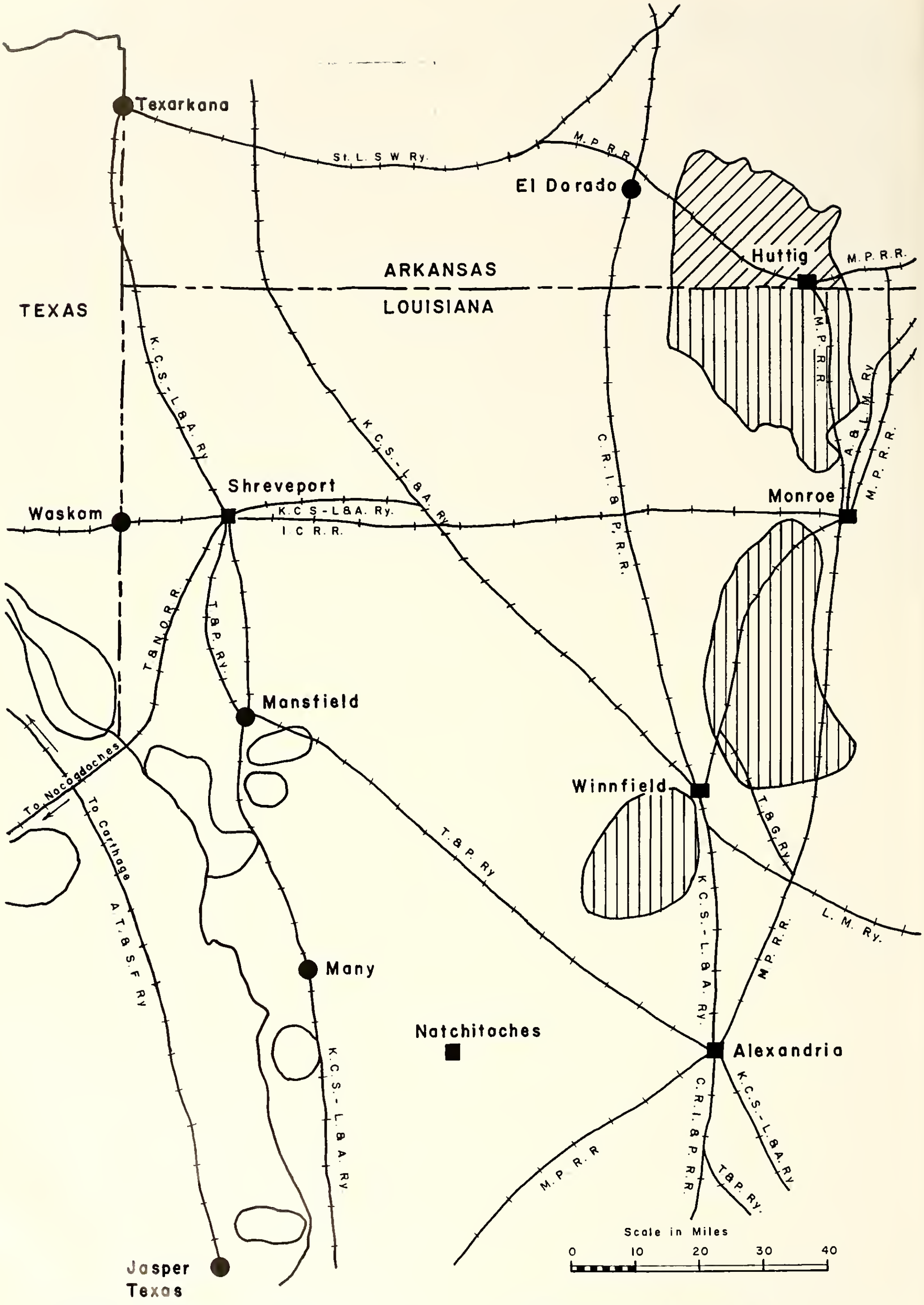
If a man could pick exactly the right time to go catfishing he'd say, "Give me a rising river and plenty of mud.

For some reason, known only to the cats themselves, catfish go on a feeding binge whenever rains upstream swell the rivers and cloud the waters with a curtain of mud.

Catfish apparently sense the abundance of food washed into the river during periods of rising waters. They hurry to gorge themselves before these extra rations disappear. And, during the process, they gobble anything that appears edible . . . plus a few other delacies that would be difficult for anything but a catfish to digest.

Muddy waters encourage cats to leave their deep hidden dens and invade the shoals. This means that most anywhere you set out a line you'll find fish. As the currents speed up strikes are swift and sure, you'll find bait stolen less often.

If waters reach a near-flood stage, all aquatic life moves into protected spots such as small tributaries. These areas become packed with crayfish, insects, minnows and various other forms of food. And game fish naturally follow.



▨ Olin Matheison Chemical Corp.- Ark.

▥ Olin Matheison Chemical Corp.- La.

AS WE SEE IT

D. H. Janzen, Director, Bureau of Sport Fisheries and Wildlife, U. S. Dept. of the Interior, told those in attendance at the annual meeting of the Outdoor Writers Association of America, at Hot Springs, Arkansas on June 8th, that: "Mother Nature, in the form of a severe drought in the duck production center of the Canadian provinces and in the Dakotas, is very likely going to force us to curtail the waterfowl hunting season this fall, which undoubtedly will directly affect the sale of duck stamps.

"We fear that the reduction in receipts will be serious enough to practically stop all further optioning (of purchase and/or lease of needed wetlands areas to preserve them in their natural state or from drainage) for the next 12 months. Already we are getting a loud reaction from some of our field offices that have been working hard on this program (made possible by boosting the duck stamp price to $3.00) and now have to give up the immediate acquisition of wetlands, some of which may be converted to the plow before purchase offers can be made," Janzen said.

"We can always hope that some miracle will occur on the prairies and that an average production will be forthcoming, but frankly I feel the chances are very slim . . . We still hope that Mr. Duck Hunter will have enough faith in the future of this sport to contribute his $3.00 for a duck stamp even though the hunting prospects this fall look pretty grim. This $3.00 investment in wetlands is an insurance payment against the permanent retirement of his duck hunting equipment and his dreams of future duck hunting trips for himself and for those who come after him.

"The waterfowl habitat picture I have painted may look pretty dark, but there is absolutely no question in my mind but that unless we are successful in greatly slowing up the wetlands loss trend of the past 15 years, duck hunting as we now know it will rapidly become only a memory for most of those participating in this sport today. The American public in the final analysis will have to determine whether it wants to pay the price.

"The tragic part of this whole affair is that the duck hunter is paying the price—twice or more. The duck hunter should and *we urge him to buy* his $3.00 duck stamp this year regardless of the prospects for the coming season as for the first time in history Mr. Wildfowler is assured that 100% of his $3.00 will be used to preserve wetlands habitat. At the same time we urge him to take five minutes of his time and invest 4¢ in a postage stamp and write his Congressman that this ridiculous federal subsidy of draining waterfowl pot holes in this country must cease—now. In this day and age with mounting farm surpluses there is no valid reason to continue the drainage of pot holes which may have been needed in World War II days but is not needed now. It is unbelievable that the duck stamp-buying hunter will permit "his" government to authorize agencies to drain pot holes while the Bureau of Sports Fisheries and Wildlife is spending similar tax dollars and duck stamp monies in an effort to buy wetlands and "save them from the plow". The duck hunters of these United States can stop this wasteful drainage if only they will devote as much time talking to, or writing, their representatives in Washington as they do in building their duck blinds or painting their pirogues or decoys.

MUNICIPALITIES AND BOAT LICENSING

In a far-reaching decision expected to set a national precedent, the Minnesota Supreme Court has ruled local municipalities do not have the right to license recreational boats on waters within their boundaries.

Because boating is enjoyed over a wide area, "it presents a statewide problem and not a matter which is peculiarly subject to local regulations," said Justice Leroy E. Matson, writer of the 5-2 majority opinion.

The decision climaxed a two year legal battle by a former St. Paul, Minnesota, marine dealer who purposely violated boat licensing restrictions imposed by several small communities in the area. He claimed the local villages did not have the power to require licensing, nevertheless, he was hailed before a justice of the peace of one of the villages, found guilty, and fined $100.

BATON ROUGE LEAGUE DEVISES LAKE FISHERIES MANAGEMENT PLAN

After three years of effort, the Baton Rouge Sportsmen's League has made public their suggested plan for the improvement of City Park and University Lakes in Baton Rouge. The plan was devised after much field work, careful study and evaluation of all the factors involved.

City Park and University Lakes are located in south Baton Rouge. City Park Lake contains approximately 47 acres and varies in depth from a few inches to a maximum of 6.5 feet; it is about ½ mile long and about ¼ mile across at the widest point. University Lake contains about 195 acres and varies in depth from 1 to 4.5 feet; it has a length of about 1 mile and a width of 1,000 feet to ½ mile. The shore line is approximately 4.5 miles in length. It is proposed that the lake be deepened so that all water is three or more feet in depth for maximum fish production and weed control. The bottom would be graded so that in the future all areas of the lake will drain when the 36-inch sluice gate is opened.

Since it is desirable to deepen parts of each lake, it is necessary that they be drained to permit operation of earth moving equipment on the lake beds. This would be done by cutting the levee along the southwest corner of University Lake. Later a 36-inch sluice gate would be installed in the crevasse to permit future "draw downs". The little water remaining after initial draining would be either pumped out or treated with chemicals to destroy all fish life.

Since brush, logs, stumps, etc., interfere with seining and removal of rough fish and other tools of fisheries management these obstructions would be removed. A series of earthen fishing piers will be built from earth that is moved in deepening the lakes. The number that is constructed will depend on the amount of earth that is moved. These earthen fishing piers would be about 15 feet across and spaced about 250 feet apart. If excess earth were present, small islands could be built at convenient points in the lakes. All banks will be sided, landscaped and beautified.

Cement boat ramps of sufficient width to permit launching of two or more boats at the same time will be constructed on both lakes. As much parking area as possible should be graveled or paved near the boat ramps on each lake. A concession building and area will be constructed near the main boat ramp on University Lake.

COAST GUARD NOW REQUIRES BOAT ACCIDENT REPORTS

In a move designed to gather reliable statistics on water safety, the U. S. Coast Guard now is embarked on a new accident reporting program for boatmen. Under the new program, made possible by the Federal Boating Act of 1958 last fall, all accidents involving motorboats on federal waters must be reported to the Coast Guard if they result in loss of life, injury to any person causing incapacitation for more than 72 hours, or in damage to property in excess of $100.

A report must be made within 48 hours if loss of life results from an accident. All other accidents must be reported within five days. All reports must be made in writing on the proper form and submitted to the Coast Guard Marine Inspection Office in New Orleans.

A Coast Guard form (CG-3865) "Boating Accident Report" is available at all Coast Guard Marine Inspection Offices and other shore facilities. This measure is in effect now! Registration of motorboats operated by machinery of more than 10 H.P. used on navigable waters of the state under federal jurisdiction must be accomplished before April 1, 1960. Full details on this matter will be given in a future issue.

FEDERATION CONTINUES TO GROW

Since the 20th annual convention of the Federation held in Baton Rouge on February 20-22, four wildlife clubs have been formed and have affiliated with the Federation. A fifth club, which has functioned for some time unanimously, voted to join the ever expanding Louisiana Wildlife Federation. We are happy to welcome the following clubs into the fold:

THE KAISER FIELD AND STREAM CLUB: President, Van Allain, 17 W. Chalmette Circle, Chalmette; 1st Vice-President, Paul Cunningham, Box 1113, Chalmette; 2nd vice-President, Roy Priser, 2808 Ivy Place, Chalmette and financial secretary-treasurer, John J. LeBlanc, 6042 Constance Street, New Orleans.

DE LOUTRE WILDLIFE CLUB: President, S. H. Cooper, Linville; Vice-President, C. S. Spillers, Linville; Secretary-Treasurer, L. E. Trout, Spencer.

ST. MARTIN PARISH SPORTSMAN'S CLUB: Leonard Dauterive, president; Jessie Guidry, Cecilia, 1st Veep; M. A. Bernard, St. Martinville, 2nd Veep; and Gerald F. Durand, St. Martinville, secretary-treasurer.

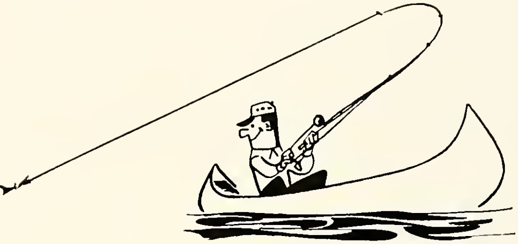
MADISON PARISH WILDLIFE UNIT: James C. Martin, president; E. E. Wolfe, vice-president; and Gaines R. Byram, secretary-treasurer. All officers reside in Tallulah.

CASTOR CREEK WILDLIFE CLUB: Clifton Barton was elected president; Pete Henderson was elected vice-president and Benny Zeagler was named secretary-treasurer.

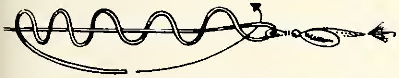
LA SALLE PARISH WILDLIFE FEDERATION, for many years a leader in the Federation, was reorganized and the following officers elected: Dr. W. B. Smith, president; Boatner Coon and James H. Martin, 1st and 2nd vice-presidents, respectively; Jimmie Wallace as "scribe" and L. W. Peppers as treasurer.

If there is no wildlife club in your town—then organize one. Write the Federation office for information and/or assistance, free of obligation; Box 8488, L.S.U. Station, Baton Rouge 3, Louisiana.

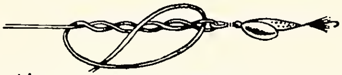
Basic fishing knots



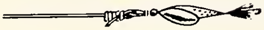
IMPROVED CLINCH KNOT ... for joining line to lure



... double end back from eye of hook and take 5 turns around standing part of line

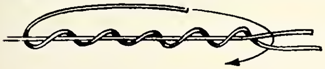


... thrust end between eye and first loop, then back through big loop as shown

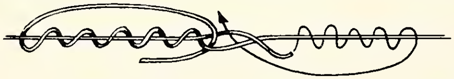


... pull up slowly and tight as possible. Cut off end at one-eighth inch.

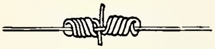
IMPROVED BLOOD KNOT ... for joining two lines



... lap ends, twist 5 times as shown, tuck end back and hold.

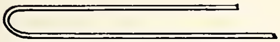


... Repeat at opposite end, taking 5 twists in same direction. Push end through center of lap.

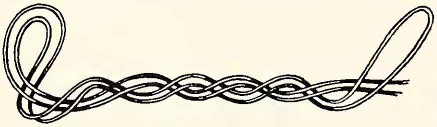


... Pull up slowly and tight. Allow turns to gather as shown above.

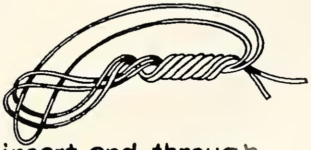
IMPROVED END LOOP ... for forming a loop



... form a double strand 4 to 6 inches long

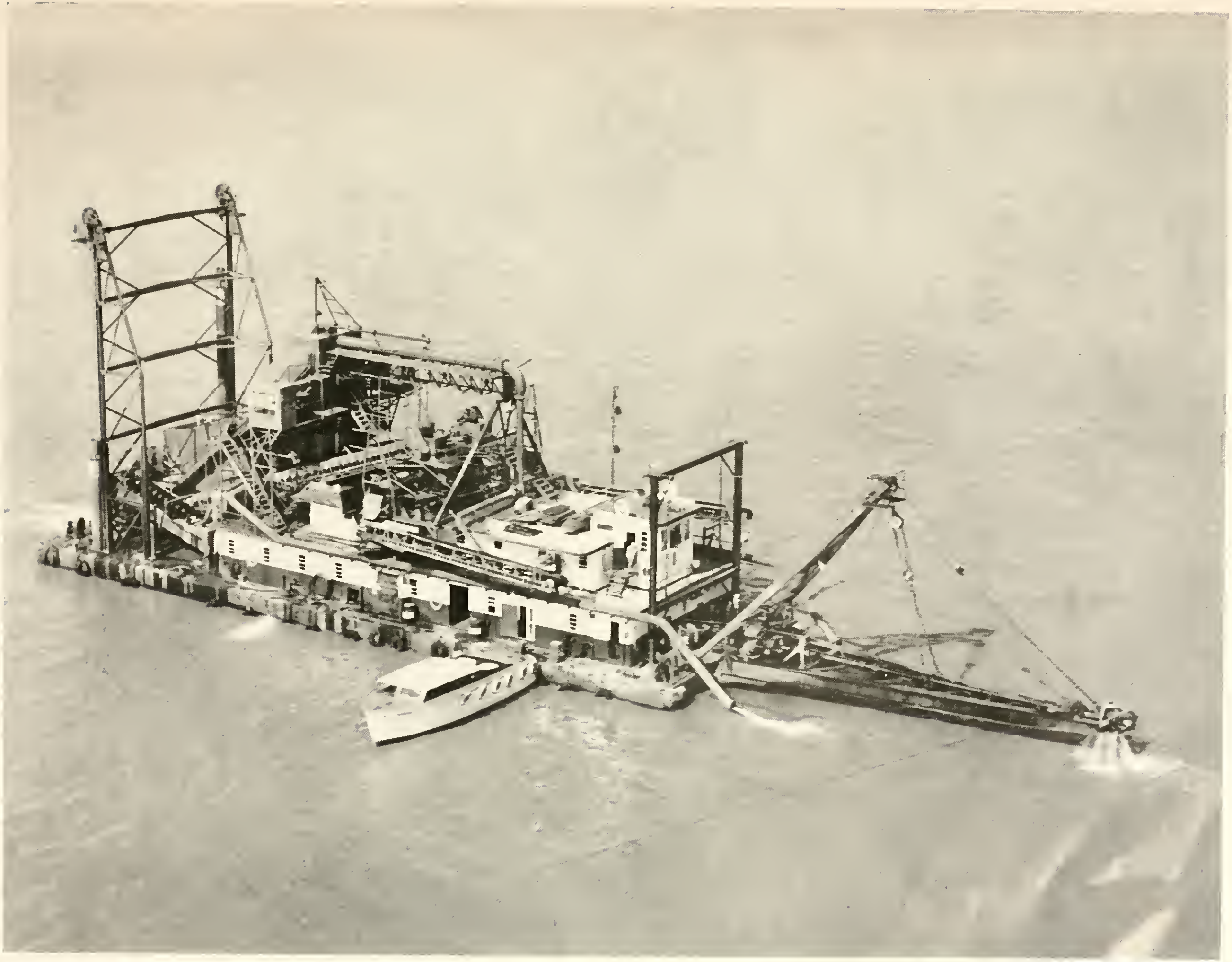


... fold the "U" shaped bend back and spiral around itself 5 times for maximum strength



... insert end through first loop as shown, Pull up as tight as possible.

Illustration courtesy E. I. du Pont de Nemours & Company



—*photo by Jesse Grice*

MODERN METHOD OF DREDGING REEF SHELLS IN LOUISIANA WATERS